

C.5

MEMO TO: City Council

FROM: Rosemarie Ives, Mayor

DATE: February 17, 2004

SUBJECT: **APPROVAL OF SUPPLEMENTAL ENGINEERING SERVICES
AGREEMENT NO. 5 FOR FINAL DESIGN, WATER SOURCE
IMPROVEMENTS, PROJECT NO. 92-OW-62**

I. RECOMMENDED ACTION

Move to approve Supplemental Engineering Services Agreement No.5 for Final Design with HDR Engineering, Inc. for \$1,340,660 plus contingencies of \$84,670 for a total of \$1,425,330 for the Water Source Improvements, Project No. 92-CI-62 and authorize the Mayor to sign the agreement.

II. DEPARTMENT CONTACT PERSONS

David Rhodes, Director of Public Works	556-2705
Bill Campbell, City Engineer/Assistant Director of Public Works	556-2733
Ron Grant, Construction Division Manager	556-2742
Dennis Brunelle, Project Manager	556-2724

III. DESCRIPTION

Background:

Previously Council approved the selection of HDR to evaluate the four existing City Wells 1, 2, 3, and 5 and to make recommendations on upgrades needed to bring them into conformance with existing Department of Health standards. Supplement No.1 provided for the preliminary design of the recommended improvements identified in the original agreement.

Supplement No. 2 provided for additional engineering analyses to support design and a boundary survey of Anderson Park to site the new treatment facility for Wells 1 and 2.

During the preliminary stages of design, it was determined that there was very little equipment that was salvageable from any of the existing four wells. Based on this determination, all four wells need to be rebuilt from their wellheads up. This included new piping, valves, controls, chemical treatment, and new buildings to house the wells and treatment facilities. Supplement No. 3 provided for design of this expanded scope of work for all four wells. Under this agreement the City directed HDR to proceed with design using chemical treatment, which at the time was the accepted standard for purifying and adjusting the *pH* of the well water for domestic use in the City.

Supplement No. 4 provided for preliminary engineering needed to incorporate into the design the use of “packed towers” to adjust the *pH* of well water which is currently accomplished using caustic soda. The “packed towers” method of adjusting *pH* is a proven newer technology that allows the City to abandon the use of caustic soda, which is difficult to safely store and handle, and barely manages the problem. This treatment is necessary because the City’s well water is saturated with carbon dioxide, which results in a slightly acidic raw water that can promote corrosion of plumbing systems. Without treatment, the water could leach lead out of older copper plumbing and be out of compliance with Department of Health requirements. Supplement No. 4 also provided for the restoration or development of well casings at Wells 1 and 3 and the development of a new well casing at Well 2.

The current plan is to build Well No. 5 this year and Wells 1, 2, and 3 next year. This will allow the City to phase the shut down of the wells and maximize the City’s well water production during construction of the new facilities.

Scope:

Supplemental Agreement No. 5 directs HDR Engineering to proceed with final design of all four wells incorporating a packed tower system to replace the previously specified caustic dosing systems for *pH* control of well water to meet Department of Health requirements. Incorporating these degassing systems (packed towers) will require the redesign of three of the five structures involved at the three well sites. Also included in this agreement are the design of upgrades to the control and monitoring systems at all four wells and their associated treatment facilities.

IV. IMPACT

A. Service/Delivery:

This project provides for improvements to four of the City's existing wells, related pump houses and treatment facilities to comply with the Safe Drinking Water Act and to bring them into conformance with the applicable local, State and Federal laws and requirements. In so doing, it will provide for a safer work environment for maintenance personnel and reduce over all maintenance at the facilities.

B. Fiscal:

Estimated Project Costs

HDR Engineering, Inc.

Preliminary Engineering	\$1,470,001
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Supplement No. 5	1,425,330
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City Administration	<u>180,000</u>
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Estimated Design Cost	\$3,075,331
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Funding:

Water/Wastewater CIP	\$7,942,165
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Note: Funds are available to construct Well No. 5, however, additional funds will need to be appropriated to construct Wells 1, 2, and 3. The total estimated project cost will be developed during this supplemental work.

V. ALTERNATIVES

Council could choose not to do the improvements to Wells 1, 2, 3, & 5.

VI. TIME CONSTRAINTS

Begin Construction (Well 5)

June 2004

Begin Construction (Wells 1, 2, & 3)

Spring 2005

VII. LIST OF ATTACHMENTS

- A. Vicinity Map
- B. Supplemental Agreement No. 5

William J. Campbell for

David Rhodes, Director of Public Works

2/6/04

Date

Approved for Council Agenda

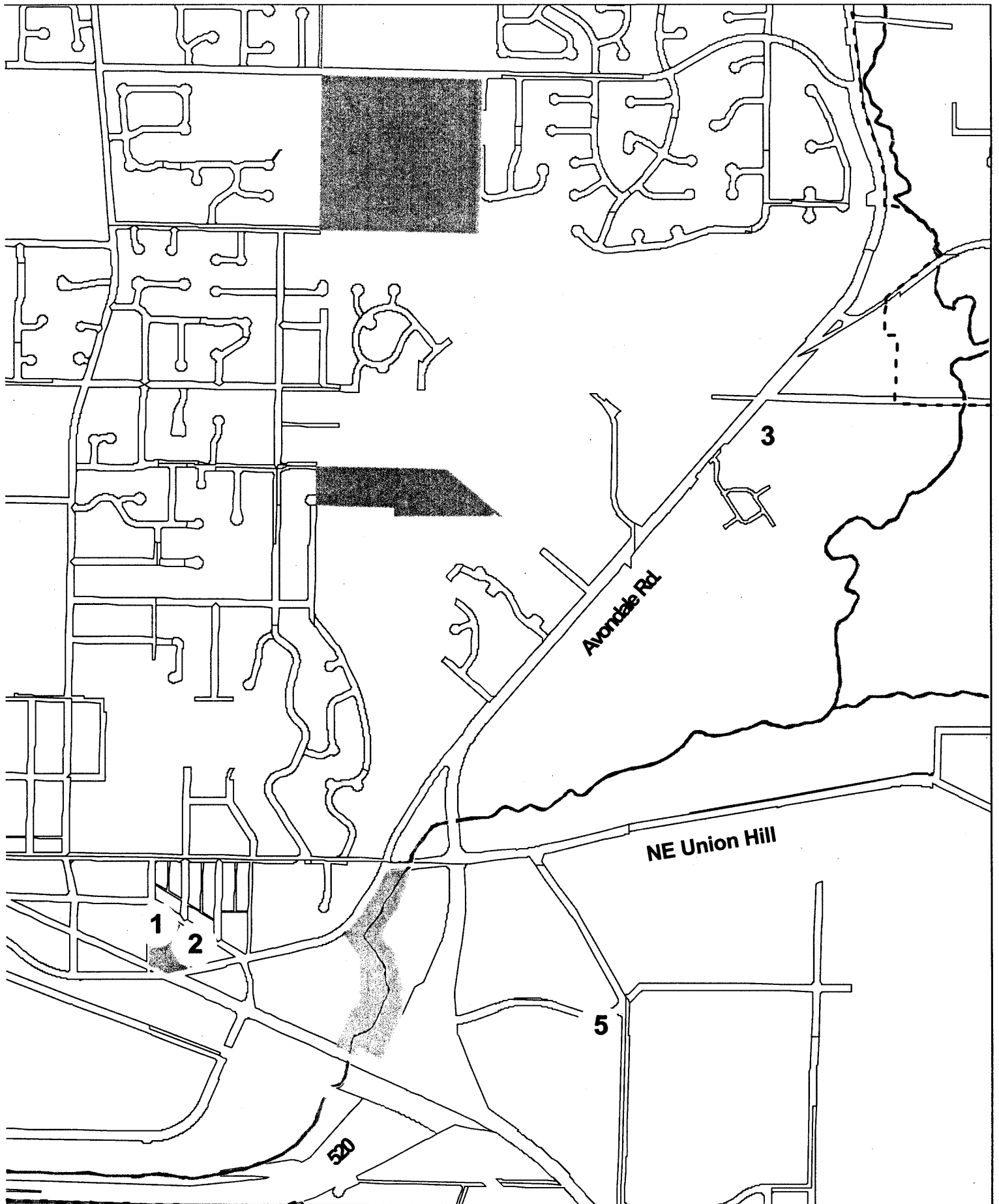
s/s

Rosemarie Ives, Mayor

2/10/04

Date

ATTACHMENT A



Vicinity Map: Source (Well) Improvements